DOCUMENT RESUME

ED 227 361 CE 035 487

AUTHOR Medoff, James L.; Wiener, Jonathan B.
TITLE Labor Markets in Imbalance: Review of Qualitative Evidence.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE Nov 82
CONTRACT 400-81-0021
NOTE 18p.; For related documents, see CE 035 484-485.
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Inflation (Economics); Job Skills; *Labor Market; *Labor Needs; *Labor Supply; Literature Reviews; *Productivity; Technological Advancement; Unemployment; Vocational Education
IDENTIFIERS *Labor Market Imbalance

ABSTRACT

Recent statistical investigations indicate that labor market imbalance has increased during the past decade and has had important deleterious effects on the nation's inflation and productivity growth records. A growing difficulty in filling skilled jobs at a given unemployment rate is reflected. Business community analysts attribute the growing imbalance to changes in technologies and geographic dispersion of jobs and to changes in education and training of the workers that are out of step with the economy's needs. The business community clearly recognizes the magnitude of imbalance. Employers' responses to this problem have caused significant increases in wage growth and significant declines in productivity growth. One response for the imbalance is the attempt to get skilled workers from competitors. Bidding wars that raise wages and prices often result. Alternatively, firms accept a poorer fit between workers and jobs than has been customary, which serves to lower productivity. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

NStacey ✓
400-81-0021

ED227361

LABOR MARKETS IN IMBALANCE:

REVIEW OF QUALITATIVE EVIDENCE

James L. Medoff
Harvard University
and National Bureau of Economic Research

with the assistance of
Jonathan B. Wiener
Harvard University

November 1982

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

CG 035 187

Recent statistical investigations indicate that labor market imbalance has increased during the past decade, and in so doing has had important deleterious effects on our country's inflation and productivity growth records.[1] Are these phenomena real? Or are they illusory, only the results of the poor quality of our data and econometric experiments? One way to answer these questions is to ask a group that should know — representatives of business who confront and react to the imbalance. In order to carry out such an inquiry, we have examined articles from periodicals from 1958 to the present.[2] In this review, every article catalogued under the heading "skilled labor" was inspected. As shown elsewhere, the quantity of discussion of skill imbalance at a given point in the business cycle has risen dramatically in the seventies.

If, however, we turn from the quantity of lines to their content, we can begin to ask a number of important questions. First, does the business community demonstrate an awareness that labor market imbalance is on the rise? Do employers find more difficulty in filling jobs, for whatever reasons, at a given level of unemployment or economic activity? If the business press does understand the nature of the shifting imbalance curves, to what, if anything, do industry analysts attribute the shifts? And what do they foresee as the results of labor market imbalance? Our investigation of these questions leads us to conclude that the business community clearly recognizes that the magnitude of imbalance at a given point in the business cycle has grown substantially during the past ten years, and that employers' responses to this problem have caused significant increases in wage growth and significant declines in productivity growth.

I. The Growth of Labor Market Imbalance

The increasing severity of skill imbalances is brought out clearly by a reading of the business press articles dealing with skilled labor over the past two and a half decades. Before the late 1960's, there was almost no mention of worsening skill shortages associated with worsening economic conditions. Throughout the period, articles linked shortages of skilled labor only with upturns in economic activity. A Factory Management article in 1958 said that "business expansion" would cause skill shortages by 1961, but that the market would be loose until then. In 1965, Business Week asked of the industrial nations, "How can they build up their growth without rushing head-on into a shortage of men to operate industrial machinery?" A 1965 Iron Age piece attributed shortages to "employment gains" and "the drain brought about by Vietnam." The year 1966, Business Week wrote, brought with it low unemployment — 2.6% for adult men — and that "as a result, many bank and Federal Reserve Board economists expect labor shortages..." A Monthly Labor Review of that year ascribed growing skill shortages to "the growth of the economy." An August, 1967 issue of Management Review reported that "until recent boom years, when the skills shortage became a serious limitation on production and profit levels, few firms were really concerned about long-term manpower planning."

The first article to hint at a growing difficulty in filling skilled jobs at a given unemployment rate was published in Personnel Journal in April of 1969. That article bemoaned the fact that:

> ... while the national unemployment rate is only 3.5%, many hundreds of thousands of potentially productive laborers are in varying stages of subemployment, whether unemployed or disemployed. At the same time, American business and

> industry is feeling many pangs from an insufficient supply of labor. What in reality is the case is that there is not so much an unavailability of labor, but an unavailability of trained labor.

The year 1969 appears to have been a conceptual as well as statistical turning point. While no articles surveyed discussed increasing skill shortages for a given level of unemployment before the Personnel Journal piece, every article thereafter in some way mentioned the outward-shifting imbalance curves. The differences are striking. A 1972 Industry Week article described "a mismatch of work skills and available jobs" which had not existed before. The article pointed in particular to the machine tools industry and to the Southwest (with a job vacancy rate which was apparently double the national rate). Closer to the mark was a January 1973 Business Week article, which began, "The 5.2% unemployment rate ... still shows there is plenty of slack to take up..." Still, it continued, the nation was encountering "shortages of skilled labor in some major markets and industries." The article explicitly mentioned higher levels of quits and lower levels of layoffs — indicating a tight labor market; at the same time, it alluded to rising unemployment — indicating a loose market. According to this and related pieces, the principal occupational groups in short supply were engineers, machinists, mechanics, and electricians. In 1974, Industry Week reported that employers would hire skilled workers for whom there were no immediate jobs, just to ensure their availability should jobs arise. The discussion continued: "The situation doesn't appear to be improving despite the rise in the unemployment of such workers due to the energy pinch," again illustrating that imbalance curves were shifting out. In 1975 Business Week anticipated much of the recent work on the growth of labor market imbalance

with a piece which stated: "Help Wanted? With unemployment at 8.2% and still rising ... jobs go begging? In brief, yes... The unemployed do not have the right skills for the unfilled jobs." In Los Angeles, the article noted, the unemployment rate was 8.9%, but many firms could not find skilled technicians or engineers. Business Week reported in 1978 that "the market for engineers is the tightest in more than a decade" (while prime-age male unemployment went from 1.7% in 1968 to 3.4% in 1978); adding that one consulting firm estimated recruitment advertising volume to be "higher during the first quarter than for any quarter since 1966" (when the prime-age male unemployment figure stood at 2.1%). Meanwhile, Iron Age noted the trend of the decade in its 1978 piece, which said that "the words 'acute' and 'heavy' keep cropping up in conversations with metal working executives about the demand for skilled workers... each year the emphasis on those words gets stronger." Also in 1978, a Wall Street Journal front-page article described various firms' encounters with skill shortages. In an overview of the business climate, it reported that "shortages may seem anomalous in an economy in which the unemployment rate is at historically high levels... But most of the jobless simply aren't qualified for many of the jobs available... 'The inventory of skills and experience isn't high for the same percentage unemployment' in former years, the Conference Board's Mr. Goldstein says."

The year 1979 was no different. Industry Week reported that "the U.S. is suffering the recession blues and the ranks of the unemployed have begun to swell, (but) there is no evidence of that, in the ongoing scramble to find skilled workers." In 1980 William Winpisinger, President of the Machinists' Union, wrote that "Even with 6 million people unemployed, there was no surplus

of skills in the nation as a whole..." Industry Week headlined one of its 1981 articles, "Irony: As layoffs rise, so do skilled job openings." The article details that "Despite a nationwide unemployment rate of about 8.0%, the skilled labor shortage in the U.S. has never been worse — and it is growing." And Pat Choate, Senior Policy Analyst for economics at TRW, wrote in the Summer 1982 issue of Commentary, "There is a growing mismatch between the needs of employers and available workers." All these post-1969 comments stand in sharp contrast to the traditional upturn/tight labor market, downturn/loose labor market analyses found in the business press before 1969. The outward shifts in the statistical imbalance curves after 1969 and 1974 were clearly reflected in the comments of those working and writing in the midst of the growing imbalance problems.

II. Causes of the Growth

To what have business community analysts attributed the growing imbalance? In general, they have offered two broad explanations: changes in the nature of the job and changes in the characteristics of the worker.[3] On the jobs side, the press focuses on changes in technologies and geographic dispersion of jobs; on the workers side, it centers its attention on education and training.

Technological Change

The business press writes of a "technological revolution" which occurred over the last decade and a half, bringing with it microprocessors, robots, telecommunications, computer services, and other elements of electronic automation.

Iron Age reported in 1973 that in one machine-tool firm, the "machines are becoming more sophisticated... That seems to beg for more sophisticated skills." Of a mining firm in 1974, Industry Week wrote, "Rapid technological changes and failure to upgrade training programs quickly enough also have the mining industry facing 'a very serious shortage of skilled workers'... The aerospace industry has a 'critical shortage' of skilled help in electronic data processors, electronic engineers and technicians, and machine operators." A reason for these high-technology skill shortages was made apparent in 1975 in Business Week, which noted that "the time lag between technological innovation and commercial application, once 15 years, is now three or four." Thus, it was asserted that each new change in technology was very quickly followed by a change in production processes, so that new skills were constantly needed, even in periods of high unemployment. The apparent massive reduction in the time necessary to bring a new technology to commercial application implies that for a given level of unemployment, more and more skilled workers would be sought. Each time the rate of introduction of technology into the workplace quickens, imbalance curves can be expected to shift outward.

One cause of the quickening pace of technological change may have been the rise in energy prices in the 1974-75 period. Business Week observed in 1975 that "the most short-handed employers in the U.S. are unquestionably the companies that drill for oil." In 1978, Business Week wrote that "the search for new and more efficient forms of energy is placing a premium on technology. The oil companies' thirst for new talent has bumped starting salaries for new petroleum engineers to an average $1,645 a month, the highest for any

specialty. Highly sophisticated microprocessors are becoming increasingly important in a wide range of products." The same article then cited Richard Pomarolli, a Ford Motor Co. personnel manager: "The product we generally deal with has become so complex that new technologies in design and energy utilization have placed a demand on the technical person as we've never had before." And in 1980, Engineering News-Record attributed that occupation's skills shortage to "the twin demands of the petroleum and synfuels industries."

New technology appears to have reduced employment for some, but Iron Age in 1978 noted that technology has displaced mostly "less skilled" workers, while it "created more demand for skilled tradesmen." In January 1981, the Wall Street Journal wrote that "word processors and other automated equipment" were increasing the "need for 'people with more skills' who can handle more difficult jobs." And Pat Choate wrote in 1982 that "in a rapidly changing, technologically based economy, product life cycles are often short, reflecting improvements in the underlying technology... the pace of development is highly dependent on the ability of workers to adapt to changing technical and skill needs."

Geographical Shifts of Employment

The business press also recognized that wide swings in the geographic locus of employment have served to create new types of jobs in places where the existing work force cannot adequately fill them. A 1977 Industry Week survey showed that 78% of the respondents in the very rapidly growing Southwest reported skill shortages, compared to 61% in the Northwest/West Coast, 57% in the Midwest, and approximately 52% in other areas of the

country. A 1972 Industry Week article reported acute skill shortages in Dallas and Phoenix; the 1973 Business Week piece listed Houston and Northern California as among the hardest hit. In 1974 Industry Week argued that skill mismatches may be seen as the product of differentials in employment demand working in conjunction with the "reluctance" of "skilled workers ... to give up seniority and move to a new area." As a result, employers in some regions are very hard-pressed to satisfy their labor demand from local markets. So, as Iron Age noted in 1978, they search out workers in the national market. The employers, in turn, frequently help to make the market national by offering "relocation bonuses" to influence the geographic choices of some employees (primarily managers and professionals). These bonuses have ranged from direct payments to company installments of swimming pools at plant sites.

Differences in regional employment offers go hand in hand with barriers to worker mobility. The press has mentioned these barriers often. A prime example is Industry Week's 1972 observation that although there were no "national shortages" of machinists, a "mismatch" existed in "pockets," often because of "blue-collar workers' unwillingness to relocate in another city... Skilled workers tend to be less mobile than managers." One barrier may be the high costs of living in high-growth areas. In 1978 Business Week pointed out that "shortages appear more acute in areas with high living costs, especially housing costs, such as California and Boston." In 1979 Electronic News agreed that high California housing costs lowered the supply of skilled workers to that area.

Another type of barrier is the fact that many skilled workers simply do not know where jobs are being offered. Numerous articles mentioned employers'

unwillingness to use government data sources to find workers in other states (the employers viewed the data banks as simply more red tape). Industry Week's 1977 survey reported such comments as "Government, never" and "I'm just fed up with government messing around with everything they can put their finger on." Some articles explicitly mentioned imperfect information. Business Week suggested in 1975 that "the underlying problem is related to neither recession nor prosperity, but involves a basic malfunctioning of the U.S. labor market... World Southern Corp. needs crane operators in Charleston, and Maryland Shipbuilding & Drydock Co. needs welders in Baltimore, but does anyone in Milwaukee know it?" That article also referred to "traditional bureaucratic red tape and traditional employer distaste for the U.S. Employment Service" as being obstacles to government information efforts.

Schooling's Contribution

Another factor mentioned by the business press has been the nature of the U.S. educational system. During the past decade, the business community attacked the system for being out of step with our economy's needs. Moreover, some business spokesmen were quite bitter about the attitudes they believe underlie many of the schooling system's actions. In 1973, Iron Age quoted a machine-tool firm's vice-president as saying that vocational education has become a "dumping ground for kids who didn't want to do much of anything. Though the skills were needed, society no longer valued them." Business Week wrote in 1975 that "white-collar snobbery also abounds. With the students bright enough to master the machinist's trade, for instance, parents and counselors join forces to urge that they go to college—although machinists...always seem to be in short supply." In 1977 Industry Week

agreed, asserting:

> The modern educational system is criticized often when industry bosses probe for the cause behind the skills shortage. They say the college degree is "God" to today's educators, that the blue-collar image is maligned from grade school upward... People who in past years would have become skilled after high school now go to college — and emerge four years later with "no salable skill"...

Iron Age quoted a tool and die executive in 1978: "The whole country was berserk about going to college." And in 1980, William Winpisinger of the International Association of Machinists complained that "parents, teachers, and high school career counselors have been steering at least a generation of students away from potentially satisfying and profitable careers in skilled craft occupations."

The lack of relevant skill formation was reflected in a 1977 Industry Week piece which said that one construction equipment builder was "lucky today if 5 out of 25 applicants for a welding opening are qualified for the post." In 1978 the Wall Street Journal noted some desperate cases: Kopper's Co., an engineered metal products firm,

> ... has had openings for 3 or 4 machinists... A Sunday ad may generate 30 to 40 responses, but "only one may be qualified"... Fisher Scientific Co., a Pittsburgh-based maker of scientific equipment, recently found that none of the 20 persons responding in two weeks of advertising for a badly needed design drafter "had any qualifications related to what we needed."

Training's Contribution

Training programs are a potential vehicle for dealing with workers who lack the characteristics required for a job. The business press indicates that during the 1970's training investments were limited by bottom-line considerations, especially among small firms. In 1978 Iron Age asserted that

"training, it should be remembered, takes time... For a small company, that's often hard to justify." In 1979 Industry Week noted a general skills shortage and said, "Managers of small firms which can't afford to sponsor training programs are especially concerned." At the same time, however, the piece noted that large firms like GE were coming around to training: "GE is building its own technical training center... to turn out 2,500 technicians annually for its 12,500-man worldwide maintenance force." But in 1980 William Winpisinger commented that skills training still was inadequate because "there simply is not enough direct return on the time and money they [employers] have to invest." Two reasons for this appear to have been most important, both related to the time during which returns to training can be realized. First, technological change makes old skills obsolete; second, the attrition of trained workers reduces their value to the training firm. In 1981, one executive attributed the majority of all skill shortages to inadequate training, in an Industry Week piece: "The price tag includes a capital investment of between $40,000 and $60,000 per worker and four years of a journeyman's time to help him complete the apprenticeship. Where skilled labor shortages already exist, small manufacturers are reluctant to use journeymen to train new employees." And in 1982, Pat Choate wrote that "public incentives overwhelmingly favor investment in capital and technology over investment in worker training. As a result, American firms spend an average of $3,300 per employee for capital and technology improvements versus only $300 per employee for worker training."

The result is that a supra-firm organization — the government or a collection of enterprises — is often needed to defray the fixed costs of a

training program. But opposition to certain aspects of government involvement is widespread. Industry Week's 1977 survey results were reported above; in brief, employers viewed government training programs and information provision unfavorably, but they approved of tax credits for employer-organized programs. Back in 1972, Industry Week had offered an explanation for some of the opposition to the government's involvement: the employers disliked the fact that state programs "refer people who are qualified regardless of sex, race or age." Then in 1979 Industry Week offered another story: incompetence. Said one plant manager, "Those schools are one horror story after another... We've had 'graduates' who couldn't find the 'start' button on a machine. They don't know how to measure or do any shop math." The article reported that most managers are "adamant in their refusal to use an obvious source — government training program graduates — no matter how desperate they are... One reason: the government selects the people to be trained." Indeed, Winpisinger wrote that managers "see apprenticeship as just one more way for government and unions to stick their noses into company business." Perhaps the most serious criticism of government training programs is that they are not really training programs at all; they are tools for social reform, for helping the poor. Industry Week discussed this position in 1981; according to one executive it cited, "CETA is a welfare program. It is addressed to unemployables... and you can't take an illiterate dropout and expect him to use the advanced textbooks required to finish an apprenticeship." The executive continued, "The targeted-jobs tax credit programs and vocational education programs suffer from the same misdirection." Pat Choate in 1982 at least broadly agreed, saying that "existing employment and training programs focus primarily

on the economically and culturally disadvantaged... and ignore the vast numbers of other workers who require retraining and upgrading to keep pace with the demands of their jobs." Thus the business community recognized that changes in emphasis seem to have occurred in our federal government's training efforts.

III. Micro Responses with Macro Implications

One response to the imbalance discussed in the business press is the attempt to get skilled workers from competitors. This often leads to bidding wars, which raise wages and prices. Industry Week documented in 1977 that:

> Pirating workers, or "body-robbing," as its victims call it, has been a major source of dissension between ... employers of skilled workers. A source with a major rubber manufacturer confesses that the company generally will seek an experienced skilled hand from outside the firm before it will upgrade an unskilled production worker... A manager with a major metal building firm reports that ... over a 20-year span at one facility, he says four positions were filled via training, while 100 skilled workers were hired from the outside.

A 1978 Business Week article was quite perceptive: "Engineers are demanding better pay and perquisites... Inevitably, these inflationary pressures will surge into the U.S. economy." The same year, the Wall Street Journal reported that "some companies are raising salaries, offering bonuses..." The article concluded with an executive's comment: "The labor shortage will eventually have to have an effect on our prices." In 1979 Industry Week said that "pirating of skilled workers is rampant and discourages many shops from sponsoring expensive apprentice-training programs because they lose graduates to shops which don't support training programs — and thus can pay higher wages." In January 1981, the Wall Street Journal quoted a personnel manager

at a Western Electric plant who said, "Want ads in the Sunday papers are running five and six pages. There's a bidding war on." The Journal reported in an April 1981 article that "because of the labor shortage, the companies are paying premiums to lure skilled workers to their shops."

Alternatively, firms can accept a poorer fit between workers and jobs than has been customary, which would serve to lower productivity. The 1977 Industry Week article was overflowing with discussions of productivity. It said, "Efficient plant operation is becoming increasingly difficult for some managers to maintain." One problem: without enough skilled technicians, "maintenance has not been able to keep up to date." Also, since labor quality levels have declined, "there are too many mistakes" and product quality declines. In turn, the business loses money and is less able to pay the high wages skilled workers demand. A dramatic example of declining work quality comes from Muffler Dynamics Inc. in Chicago: "We have hard-working unskilled people, but they can't read a ruler." In 1978 the Wall Street Journal wrote that some firms were "hiring less-qualified people, using more temporary help and stepping up the use of costly overtime," hence leading again to increased costs and lower productivity. Said one firm, "We are being forced to hire the most qualified from a batch of the least qualified." In 1981, Industry Week wrote that "the shortage is seriously affecting the performance and competitiveness of basic U.S. industries." In April 1981, the Wall Street Journal pointed out that "the result is a chronic productivity predicament. Employers compete for the dwindling pool of operators; output per machine declines..." And Pat Choate wrote in 1982 that "if the U.S. economy is to remain competitive, the major focus of national employment and training policy

must be the improvement of the work performance of the entire labor force."

In sum, the business press seems keenly aware of the growing labor market imbalance documented elsewhere. Moreover, it provides a glimpse of the micro responses to this imbalance that seem to underlie some important macro problems confronting our country.

NOTES

1) See James L. Medoff, "The Importance of Employer-Sponsored Job-Related Training" (mimeograph, November 1982) and "Labor Markets in Imbalance" (in process).

2) The following 29 articles were chosen for textual citation from the survey of 50. They are listed in chronological order for ease of reference to the text.

Engineering News Record, March 27, 1958, pp. 80-1.
Factory Management, July 1958, p. 61.
Business Week, February 6, 1965, pp. 84-6.
Iron Age, September 2, 1965, pp. 28-9.
Business Week, January 15, 1966, pp. 32-3.
Monthly Labor Review, April 1966, pp. 365-71.
Management Review, August 1967, pp. 59-63.
Personnel Journal, April 1969, pp. 259-69.
Industry Week, August 28, 1972, pp. 11-12.
Business Week, January 20, 1973, pp. 21-2.
Iron Age, June 14, 1973, pp. 64-6.
Industry Week, March 18, 1974, pp. 8-9.
Business Week, March 17, 1975, pp. 54-6.
Industry Week, August 29, 1977, pp. 39-48.
Business Week, July 3, 1978, pp. 18-9.
Iron Age, September 11, 1978, pp. 36-8.
Wall Street Journal, October 16, 1978, p. 1.
Purchasing, January 24, 1979, pp. 28A9-12.
Electronic News, May 7, 1979, p. 52.
Supervision, July 1979, pp. 4-5.
Iron Age, July 23, 1979, pp. 49-52.
Industry Week, October 15, 1979, pp. 23-6.
William Winpisinger in American Federationist, June 1980, pp. 21-5.
Wall Street Journal, September 15, 1980, p. 35.
Engineering News Record, October 2, 1980, pp. 51-5.
Wall Street Journal, January 22, 1981, p. 1.
Wall Street Journal, April 18, 1981, p. 26.
Industry Week, December 14, 1981, pp. 29-36.
Pat Choate in Commentary, Summer 1982, p. 3-10.

3) See James L. Medoff and Katharine G. Abraham, "Unemployment, Unsatisfied Demand for Labor, and Compensation Growth in the US, 1956-1980," in Martin N. Baily, eds., Workers, Jobs, and Inflation (Washington, D.C.: Brookings, 1982), pp. 49-78.